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10/599,284	09/25/2006	Jan Bernd Lugtenburg	304-861 (193857)	6488

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EXAMINER	
KUNDU, SUJOY K	

ART UNIT	PAPER NUMBER
2863	

NOTIFICATION DATE	DELIVERY MODE
05/24/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip@akerman.com

Office Action Summary	Application No.	Applicant(s)	
	10/599,284	LUGTENBURG, JAN BERND	
	Examiner	Art Unit	
	SUJOY K. KUNDU	2863	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 February 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-7, 9, 11-15, 17-21 are rejected under 35 U.S.C. 103(a) as being obvious by Takagi et al. (4,721,388) in view of Kim et al. (US 6,954,557) and Lichtenberg (DE 3836540).

With regards to Claim 1, 11, Takagi teaches a method for measuring a measurement object having at least one reference structure for defining an object-fixed object coordinate system, with the aid of a measuring system comprising at least one sensor system for recording a contour of the measurement coordinate system, the method comprising the following steps:

positioning the measurement object in a measurement position in the coverage range of the sensor system (Abstract, Column 3, Lines 41-52), wherein the measuring object is substantially rotationally symmetrical with respect to a measurement object axis (Column 4, Line 47 - Column 5, Line 3);

establishing the position of the object coordinate system by means of a reference structure (Column 4, Lines 30-32);

linking the object coordinate system with the measurement coordinate system (Figure 5, Column 4, Lines 47-53); and

processing the contour data, whilst taking account of the position of the object coordinate system in an evaluation unit (Column 4, Lines 13-26).

Takagi is silent with regards to rotating the sensor system about the measurement object for determining contour data,

the measurement axis extending through a bore in a central hub of the measurement object;

the central hub of the measurement object which functions as a reference structure positioned at or near the measurement object axis;

rotating the sensor system around the measurement object and;

processing the data in an evaluation unit and compensating for an imprecise location of the measurement object in the measurement position taking account of the position of the object coordinate system in relation to the measurement coordinate system.

Kim teaches rotating the sensor system about the measurement object for determining contour data (Column 8, Lines 11-23).

Kim and Takagi are silent with regards to the measurement axis extending through a bore in a central hub of the measurement object;

the central hub of the measurement object which functions as a reference structure positioned at or near the measurement object axis;

rotating the sensor system around the measurement object and;

processing the data in an evaluation unit and compensating for an imprecise location of the measurement object in the measurement position taking account of the

position of the object coordinate system in relation to the measurement coordinate system.

Lichtenberg teaches the measurement axis extending through a bore in a central hub of the measurement object (Figure 1, 10, Abstract);

the central hub of the measurement object which functions as a reference structure positioned at or near the measurement object axis (Figure 1, 10, Abstract, Page 1, Paragraph 7);

rotating the sensor system around the measurement object (Page 1, Paragraph 7, Page 2, Paragraph 6, Page 3, Paragraph 24) and;

processing the data in an evaluation unit and compensating for an imprecise location of the measurement object in the measurement position taking account of the position of the object coordinate system in relation to the measurement coordinate system (Page 4, Paragraph 2, 4, 6, "reference").

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the measurement axis extending through a bore in a central hub of the measurement object; the central hub of the measurement object which functions as a reference structure positioned at or near the measurement object axis; rotating the sensor system around the measurement object and; processing the data in an evaluation unit and compensating for an imprecise location of the measurement object in the measurement position taking account of the position of the object coordinate system in relation to the measurement coordinate system as taught by

Lichtenberg into Takagi and Kim for the purpose of accurately measuring the contour of the object/wheel for the purposes of reliability.

With regards to Claim 2, 12, Takagi teaches the method wherein during the measurement, the measurement object is so fixed by a centering device that accessibility to the reference structure is not impeded (Figure 1, Column 2, Lines 55-58).

With regards to Claim 3, Takagi teaches the method wherein centering the measurement object acts on the outer contour of the measurement object (Column 2, Line 60 - Column 3, Line 9).

With regards to Claim 4, Takagi teaches the method wherein a reference device for establishing the position of the object coordinate system scans the substantially freely accessible reference structure (Column 4, Lines 30-43).

With regards to Claim 5, 13, Takagi teaches the method wherein the reference device scans in noncontacting ("light spot detecting sensor") manner the substantially freely accessible reference structure (Column 4, Lines 30-43).

With regards to Claim 6, 14, Takagi teaches the method, wherein a reference device performs a mechanical orientation of the measurement object by means of the reference system for establishing the position of the object coordinate system. (Figure 5, Column 3, Lines 53-65).

With regards to Claim 7, 15, Takagi teaches the method wherein a shape and/or position variation of at least one measurement object surface portion provided for engagement on an object surface (Column 4, Lines 13-26).

With regards to Claim 9, Takagi teaches the method, wherein the measurement object conveyed substantially linearly between an insertion opening and a discharge opening of the measurement system (Figure 4).

With regards to Claim 17, Takagi teaches the device wherein the reference device is arranged in rotary manner substantially coaxially to a rotation axis of the sensor system (Figures 3-4, Column 3, Lines 53-65).

With regards to Claim 18, Takagi teaches the device wherein integration takes place into a conveying device, particularly a linear conveying device (Column 4, Lines 39-43).

With regards to Claim 19, Takagi teaches the device wherein there are size determination means for a basic positioning of the sensor system and/or reference device (Column 4, Lines 13-26).

With regards to Claim 20, Takagi teaches the method wherein the reference structure is measured (Column 4, Lines 13-26).

With regards to Claim 21, Takagi teaches the method wherein the measurement object is conveyed substantially perpendicular to the sensor system rotation axis (Figure 4).

Wit regards to Claim 22, 26, Takagi is silent with regards to the method wherein the sensor system is rotated about a rotation axis enclosed by a circumference of the measuring object.

Kim teaches the method wherein the sensor system is rotated about a rotation axis enclosed by a circumference of the measuring object (Figure 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the method wherein the sensor system is rotated about a rotation axis enclosed by a circumference of the measuring object as taught by Kim into Takagi for the purpose of obtaining data from all dimensions.

With regards to Claim 23, 27, Takagi is silent with regards to the method wherein the measurement comprises a complete rotation of the sensor system about a rotation axis.

Kim teaches the method wherein the measurement comprises a complete rotation of the sensor system about a rotation axis (Figure 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the method wherein the measurement comprises a complete rotation of the sensor system about a rotation axis as taught by Kim into Takagi for the purpose of obtaining data from all dimensions.

With regards to Claim 24, 28, Takagi is silent with regards to the method wherein the measuring object rests during the measurement.

Kim teaches the method wherein the measuring object rests during the measurement (Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the method wherein the measuring object rests during the measurement as taught by Kim into Takagi for the purpose of obtaining accurate measurements.

Claim 25, 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi et al (4,721,388) and Kim et al. (US 6,954,557) in view of Vanaki (US 5,793,492).

With regards to Claim 25, 29, Takagi and Kim are silent with regards to wherein the measurement object is a wheel.

Vanaki teaches wherein the measurement object is a wheel.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein the measurement object is a wheel as taught by Vanaki into Takagi and Kim for the purpose of making measurements on a specific object.

Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi et al. (4,721,388) and Kim et al. (US 6,954,557)in view of Martinschledde et al. (US 2006/0158663).

With regards to Claim 8 and 16 Takagi and Kim are silent with regards to the limitation of the method wherein a marking is made on the measurement object defining a characteristic measurement point by a marking device connected to the sensor system.

Martinschledde teaches the limitation of the method wherein a marking is made on the measurement object defining a characteristic measurement point by a marking device connected to the sensor system (Paragraph 33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the limitation of the method wherein a marking is made

on the measurement object defining a characteristic measurement point by a marking device connected to the sensor system as taught by Martinschledde into Takagi and Kim for the purpose of properly alignment on the measurement object to accurately measure the contour of the object.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takagi et al (4,721,388) and Kim et al. (US 6,954,557) in view of Prinzhausen et al. (US 2003/003898948).

Takagi and Kim are silent with regards to wherein measurement data of the sensor system are linked with measurement data of the reference device for determining wall thickness.

Prinzhausen teaches wherein measurement data of the sensor system are linked with measurement data of the reference device for determining wall thickness (Paragraph 22).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include wherein measurement data of the sensor system are linked with measurement data of the reference device for determining wall thickness as taught by Prinzhausen into Takagi and Kim for the purpose of accurately measuring different specification of the object.

Response to Arguments

Applicant's arguments with respect to claims 1, 11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUJOY K. KUNDU whose telephone number is (571)272-8586. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sujoy K Kundu/
Primary Examiner, Art Unit 2863
May 19, 2010